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Marine Corps Combat Service Support Schools
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MTCC 4108

STUDENT OUTLINE

NEW EQUIPMENT/SYSTEMS OVERVIEW

OUTLINE

1. COMBAT SERVICE SUPPORT ELEMENT.

a. CSSE. The Combat Service Support Element (CSSE) provides many support functions to the Marine Air-Ground Task Force (MAGTF). It can operate from naval vessels or expeditionary bases ashore CSSE can sustain forces and permit maximum flexibility in responding to crises.

2. HIGH MOBILITY MULTIPURPOSE WHEELED VEHICLE A2 SERIES (HMMWVA2).

a. Description. The HMMWVA2 is currently replacing the existing fleet of aging HMMWV's. The HMMWVA2 will sustain the fleet's current capabilities while improving safety, reliability, availability, maintenance, and durability. An evolutionary design, the HMMWVA2 incorporates a 15-year corrosion prevention package, fully independent suspension, and electronically controlled automatic 4-speed transmission, an Environmental Protection Agency compliant 6.5 liter diesel engine, improved brakes, an increased payload capacity, and improved engine electrical start system, and other design improvements.

b. Operational Impact. Current HMMWVA2 replacement strategy will sustain operational capability while improving Reliability, Availability, Maintainability, and Durability (RAM-D), safety, and corrosion prevention in the light tactical vehicle.

c. Program Status. The HMMWVA2 is a Joint effort (US Army lead). USMC procurement of the HMMWVA2 began in FY 98. IOC was achieved in FY 00.

d. Procurement Profile. FY01 (QTY) 2,071, FY02 (QTY) 1,243.

e. Developer/Manufacturer. AM General Corporation remains the main developer and manufacturer of this vehicle.

3. MEDIUM TACTICAL VEHICLE REPLACEMENT (MTVR).

a. Description. The MTVR program replaces the aging M939/M809 5-ton trucks with a fleet of state-of-the-art, commercially based, medium trucks with greater mobility, lift, and reliability. The MTVR has an increased payload of 7.1 tons cross-country and 15 tons on hard surface roads and can simultaneously tow an 11-ton load. The MTVR has a 70 percent off road and 30 percent on road mission profile and is capable of sustained speeds of 30 mph cross-country. Commercially components include: 425 horse power electronically controlled engine; seven speed, continuous power, automatic transmission; 6-wheel independent suspension; anti-lock brakes; engine retarder ("jake brake"); automatic traction control; and central tire inflation.

b. Operational Impact. The user will benefit from the increased reliability and performance of a truck that is just as deployable as the current fleet of 5-ton trucks. The standard cargo variant's weight of 28,000 pounds, and reducible height of 98 inches make it internally transportable by KC-130 and externally by CH-53.

c. Program Status. The MTVR program is currently in Low Rate Initial Production. Cargo variants will be fielded from Fy01 through FY04. Wrecker and dump variants will be fielded during FY04 through FY05.

d. Procurement Profile. FY01 (QTY) 2,012, FY02 (QTY) 1,946.

e. Developer/Manufacturer. This vehicle is being developed and manufactured by Oshkosh Truck Corporation, Oshkosh, WI.

4. LOGISTICS VEHICLE SYSTEM REPLACEMENT (LVSR).

a. Description. The LVSR will replace the current heavy tactical vehicle fleet system that transport bulk liquids (fuel/water), bulk and break bulk cargo, standardized containers, ammunition, and bridging. The LVSR will provide a 5^{th} wheel capability to haul heavy combat/engineer equipment and will provide the Marine Corps' heavy wrecker/recovery capability.

b. Program Status. Concept exploration activities scheduled for FY01 completion. This vehicle is currently going through a technology demonstrator development testing, analysis of alternatives, modeling & simulation, and early operational assessment report.

c. LVSR Advanced Technology Demonstrator. The new LVSR will be configured with some new technological advances such as: 10 x 10 configuration, ABS/Traction Control, Independent Suspension, Central Tire Inflation System (CTIS), Crew Ballistic Protection, and 600 HP/2300 RPM Engine to mention a few.

5. INTERNALLY TRANSPORTABLE VEHICLE (ITV).

a. Description. The ITV program is a USMC led, Joint program with the U.S. Special Operations Command to field a family of light vehicles supporting expeditionary maneuver. The ITV will provide a deployed Marine Air-Ground Task Force with a ground vehicle that is internally transportable in heavy lift rotary wing and tilt-rotor aircraft including the MV-22 and CV-22. The vehicle will serve primarily as a high mobility weapons platform to support a variety operations to provide ground units equal or greater mobility than the Marine Air-Ground Task Force (MAGTF) maneuver elements they support, thereby enhancing their mission performance and survivability. The family of vehicles will provide Special Operations Forces with a ground mobility platform to support special reconnaissance, direct action, unconventional warfare, foreign internal defense, counter terrorism, personnel recovery, and anti-terrorism. The ITV will possess land mobility equal or greater than other vehicles in the MAGTF. It will mount and employ several different types of weapons (M-2, Mk-19, TOW) and carry a crew of three to four Marines.

b. Operational Impact. The ITV family of vehicles has the mission to provide an internally transportable, light, tactical wheeled vehicle for heavy weapons employment, command and control, troop transport, light cargo transport, and ambulance duty throughout all areas of the battlefield and mission areas. All vehicles will be built off a common chassis and will be fitted with Mission Role Kits. The Light Strike Vehicle, as a variant of the ITV family, replaces the Fast Attack Vehicle (FAV) and Interim Fast Attack Vehicle (IFAV). Internal transport is critical, especially for the MV-22, so as not to decrease in-flight speed and maneuvering envelope. The ITV will be used across all spectrums of employment and in all environments.

c. Program Status. The ITV Program is in the System Demonstration phase of acquisition and is following a Non-Developmental item procurement strategy. A competitive procurement recently resulted in the award of two contracts, which each contractor delivering vehicles for technical and operational assessments. Competitive selection to a single winner, followed by Operational Test and Evaluation and initial purchase of vehicles is planned for FY02. The Acquisition Objective is for 2,675 ITVs for the USMC, with initial

Operational Capability of the Light Strike/Weapons Carrier variant planned for FY03.

d. Procurement Profile. FY01 (QTY) NONE, FY02 (QTY) 21.

e. Developer/Manufacturer. Flyer FCM LLC and AVS Inc. have been selected for the competitive phase of he program.

6. MULTI-FUEL MARINE CORPS MOTORCYCLE M1030M1.

a. Description. The M1030M1 program provides an important means of alternative transportation for a MAGTF commander. Capable of transporting two passengers, documents and/or light cargo, this motorcycle can augment military police support, convoy control, tactical/urban reconnaissance, and transportation of forward observers or transport of communication traffic in the event of degradation/failure of the electronic communication systems. The M1030M1 is able to travel improved and unimproved roads, cross-country and congested urban terrain. The vehicle is capable of burning JP-4, JP-5, JP-8, Kerosene and diesel fuel.

b. Program Status. Initial Operational Capability 4th Qtr FY02. Full Operational Capability 4th Qtr FY04.

c. Additional Information. Gas Powered Military Motorcycle, production contract awarded in FY 99 to procure 307 gasoline powered Kawasaki KLR 650 motorcycles from Hayes Diversified Technologies. This is a commercial off the shelf Kawasaki motorcycle with modifications (fuel tank, metal foot pegs, black out lighting, heavy-duty shock absorbers, militarized electrical connectors, and pannier bags. Safety gear provided as SL-3 gear, this includes helmets, gloves, goggles, elbow and shin padding.

7. AVIATION REFUELING CAPABILITY (ARC).

a. Description. The ARC provides a mobile, aviation refueling capability to the Marine Aircraft Wing. The Aviation Refueling Capability procured through this program will be a 5,000 gallon, commercial tanker truck refueler, modified to incorporate USMC unique requirements, which and will be procured through the General Services Administration as an non-developmental item. This system will provide under and over wing aviation refueling, de-fueling, and line haul (internal to MAW) to the Marine Air Wing both at garrison air stations/fields and at expeditionary airfields.

b. Operational Impact. The ARC will provide the same basic capabilities as the M970 it replaces, but with several technological advancements. The prime mover for the off road system will be the LVS and MK18A1 thus enabling an improved

ability to carry fuel cross-country to Forward Arming and Refueling Points.

c. Program Status. A field user evaluation and Milestone I/III decisions are expected in FY01. ARCs will be procured with FY01 PMC funding after a successful production decision.

d. Procurement Profile. FY01 (QTY) 100, FY02 (QTY) None

e. Developer/Manufacturer. Developer – Isometrics, Inc., Reidsville, NC. The GSA contract has 4 awardees.

REFERENCES:

1. Concepts & Issues 2001, Forging the Future Marine Corps.

2. "SUSTAINING THE FLEET", PM Transportation Symposium, 9-11 April 2001, MCB Camp Pendleton.